## Cheung, Wendy

From: Pat O'Brien <pwob@comcast.net>
Sent: Monday, August 14, 2017 2:20 PM
To: Cheung, Wendy; Wiser, Nathan

**Cc:** 'Michelle Probasco'; 'Chris Douglass'; 'Rick Clark'; 'Scott Niebur'

**Subject:** [SPAM] DI-2 annual testing

Follow Up Flag: Follow up Flag Status: Flagged

Hi Wendy,

See my responses below.

Pat OBrien

**From:** Cheung, Wendy [mailto:Cheung.Wendy@epa.gov]

**Sent:** Monday, August 14, 2017 7:45 AM

To: Pat O'Brien; Wiser, Nathan

Cc: 'Michelle Probasco'; 'Chris Douglass'; 'Rick Clark'; 'Scott Niebur'

Subject: RE: [SPAM] RE: [SPAM] DI-2 annual testing

Regarding the DI-2. Per the area permit, a temperature log is required within 6-12 months of injection (authorization to inject). The first year TEMP log was required per permit, regardless of the outcome of the CBL. You are correct in that the authorization to inject starts the clock on subsequent TEMP logs.

Since DI-2's cement did not meet our bonding requirement, as we previously discussed, we will require more frequent temp logs (or RATS, but I believe ECCV has elected to run temp logs). The RATS that you recently ran seems to demonstrates that despite the appearance of lack of cement, fluids are not moving up-hole. Was Halliburton able to provide additional explanation? I talked with Halliburton and Production Logging experts and they had no explanation for the cement bond log data.

I was not able to find in the cementing records that you sent me that low-density cement was used, but IPT suggested otherwise. Was low-density cement used? The density of the cement was 13.8 lb/gal, in the 7714 to 9088 zone. This is a higher density than the bulk of the longstring cement above 7714 feet, which is 13.2 lb/gal.

The bottom line is that after the authorization to inject is issued, you'll have 6-12 months to schedule your next TEMP log which you indicated would be preferable in the fall. I am holding off on issuing the authorization to inject (which will also include language about more frequent temp logs for DI-2 only), as you requested so that your next TEMP log would occur next fall.

Due to the changing schedule of the contractors currently building the pump station, the start date for injecting into DI-2 is unknown at this time. I believe our most optimistic start date would be on or about 9-11-17. If you could issue the permission to inject on that date, that would work well for the District.

Please let me know if you have questions on DI-2. Thanks, Wendy

From: Pat O'Brien [mailto:pwob@comcast.net]

Sent: Friday, August 11, 2017 3:46 PM

To: Wiser, Nathan < Wiser. Nathan@epa.gov >; Cheung, Wendy < Cheung. Wendy@epa.gov >

**Cc:** 'Michelle Probasco' < <a href="mailto:mprobasco@eccv.org">mprobasco@eccv.org</a>; 'Chris Douglass' < <a href="mailto:cdouglass@eccv.org">cdouglass@eccv.org</a>; 'Rick Clark' < <a href="mailto:rclark@eccv.org">rclark@eccv.org</a>; 'Chris Douglass' < <a href="mailto:cdouglass@eccv.org">cdouglass@eccv.org</a>; 'Rick Clark' < <a href="mailto:rclark@eccv.org">rclark@eccv.org</a>; 'Chris Douglass' < <a href="mailto:cdouglass@eccv.org">cdouglass@eccv.org</a>; 'Rick Clark' < <a href="mailto:rclark@eccv.org">rclark@eccv.org</a>; 'Chris Douglass' < <a href="mailto:cdouglass@eccv.org">cdouglass@eccv.org</a>; 'Rick Clark' < <a href="mailto:rclark@eccv.org">rclark@eccv.org</a>; <a href="mailto:rclark@eccv.org">rclark@eccv.org</a>; <a href="mailto:rclark@eccv.org">rclark@eccv.org</a>; <a href="mailto:rclark@eccv.org">rclark@eccv.org</a>; <a href="mailto:rclark@eccv.org

'Scott Niebur' < sniebur@eccv.org>

Subject: [SPAM] RE: [SPAM] DI-2 annual testing

Thanks Nathan,

Starting the clock for the DI-1 temp logs to come at the Permission to Inject letter date would be perfect for the District.

As an aside, using the same permit language for DI-1, our starting date for the DI-1 (5 year) temp log would also have begun at the final Permission to Inject date (provided to the District just after removal of wire lost down the hole), which was 4-30-12. This would make us only about 4 months late for the 5 year temp log instead of 13 months. A minor point as either way are late with this log and will get it run as soon as possible.

Thanks for your help on this matter.

## Pat OBrien

From: Wiser, Nathan [mailto:Wiser.Nathan@epa.gov]

**Sent:** Friday, August 11, 2017 1:23 PM **To:** Pat O'Brien; Cheung, Wendy

Cc: 'Michelle Probasco'; 'Chris Douglass'; 'Rick Clark'; 'Scott Niebur'

Subject: RE: [SPAM] DI-2 annual testing

Hi Pat,

Here is the temperature logging language from the table in Appendix B of the area permit that covers this well:

"Run TEMP log to establish baseline prior to receiving authorization to inject, additionally within 6-12 months of injection, and at least once every five (5) years after the last successful demonstration of Part II MI."

I have not been able to check on the status of things with Wendy today because she is not in today. But my understanding from your email is that the baseline temperature log was run on 8/9/2016. Once you have received authorization to inject, then you'll need to run a temperature log within 6-12 months after you commence injection, and assuming there are no fluid movement problems indicated (i.e., no external mechanical integrity problems), you'll need to conduct another temperature log to demonstrate external mechanical integrity every five years thereafter.

External mechanical integrity is defined in the federal UIC regulations at 40 CFR 146.8(a)(2): "There is no significant fluid movement into an underground source of drinking water through vertical channels adjacent to the injection well bore."

## Nathan Wiser

Environmental Scientist
U.S. Environmental Protection Agency, Region 8
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## (303) 312-6211 direct wiser.nathan@epa.gov

From: Pat O'Brien [mailto:pwob@comcast.net]

Sent: Friday, August 11, 2017 9:50 AM

To: Cheung, Wendy < Cheung. Wendy@epa.gov >; Wiser, Nathan < Wiser. Nathan@epa.gov >

Cc: 'Michelle Probasco' < mprobasco@eccv.org>; 'Chris Douglass' < cdouglass@eccv.org>; 'Rick Clark' < rclark@eccv.org>;

'Scott Niebur' < <a href="mailto:sniebur@eccv.org">sniebur@eccv.org</a>
Subject: [SPAM] DI-2 annual testing

Hi Wendy and Nathan:

Wendy I know we have talked about this before but I wanted to confirm the timing of the annual temp log you will likely require on the DI-2 well to prove up the TCA integrity.

The first temp log was run on 8-9-16, just after well construction.

We will not be physically ready to inject until about September, 2017 and as we discussed, we are not required to run another temperature log now because well injection has not started yet. If we are required to run annual temp logs using the 8-9-16 starting point, we are already late for the next annual temp log, should it be required.

If we need to run another temp log on DI-2 now, please let me know and we will have it run. I suggest using the Permission to Inject date as the starting point for the annual temp logging since the temperature profile of the well should not have changed when it was idle between 8-9-16 and today.

Please let us know your thoughts on this.

Pat OBrien